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PISCATAQUA RIVER DREDGING/ SEDIMENT TRANSPORT PROGRAM

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Descriptors: Deposition, dredging, estuary

Problem and Research Objectives:

The sedimentation processes in the Piscataqua River which necessitate the frequent dredging procedures are poorly understood, due partly to the extreme tidal and flood currents, and also to the complexity of the sediment transport mechanisms involved. The objective of this modeling project was to determine the fate of the redeposited spoils. To achieve this objective, the TABS-2 computer software package was calibrated and verified with field data of the Piscataqua River hydraulics and sediment transport processes.

Principal Findings and Significance:

The velocity and bed load sediment transport modeling of the lower Piscataqua River channel determined that the study site is accumulating sediment during the simulated tidal event. Deposition is greatest in the vicinity of the disposal location, while the locations between the dredge site and the disposal site show little or no change in bed elevation following the tidal event.